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Influence of Some Demographic Variables On Adherence to Counselling Services On Mother-To-Child HIV Transmission Among HIV Positive Pregnant Women in Ekiti State, Nigeria

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ABSTRACT: *The study accessed the HIV counselling services that are available at the Ekiti state antenatal clinics and adherence of the HIV positive pregnant women to the counselling services received. It particularly looked into the influence of demographic variables on the adherence to counselling services on mother to child HIV transmission among positive pregnant women in Ekiti State, Nigeria. Descriptive survey design was used for the study. The population for the study comprises of all HIV positive pregnant women in Ekiti State with sample of 110 of HIV positive pregnant women selected from a tertiary hospital using multistage sampling techniques. A self-designed questionnaire and an adopted instrument were used to elicit information from both the clients and the social workers at the clinic. The instruments were subjected to face and content validity. A pilot study was conducted to determine the reliability of the instruments. This was determined using test-retest method and reliability co-efficient of 0.85, found significant at 0.05 level of significance. Data were analysed descriptively using frequency count, percentage, mean, standard deviation, correlation matrix, and multiple regression. The findings show that there are enough counselling services in Ekiti State Antenatal Clinics and the counsellors are discharging their duties but more still need to be done in other to create more awareness of the preventive measure to HIV and awareness of the counselling services that are available. Also, the adherence to counselling services received by HIV positive pregnant women in Ekiti State is influenced by the education level of the pregnant women, occupation, marital status, and religion affinities. It is recommended that government should not relent in their effort to eradicate HIV and also counselling intervention should be more intensified in the hospitals. It is concluded that that there is HIV counselling in Ekiti State ante-natal clinic and the HIV positive pregnant women have moderate adherence level to the counselling services which is influenced by their level of education, occupation, marital status, and religion affinities.*

KEYWORDS: Demographic variables, HIV positive pregnant women, Mother-To-Child Transmission (MTCT), adherence to counselling services.

INTRODUCTION

It appears that in Nigeria, and particularly in Ekiti State, the rate of MTCT of Human Immunodeficiency Virus (HIV) infection is rising. The researchers speculate that this is because some HIV-positive mothers-to-be are unaware of how the virus is spread from mother to kid. The Working Group (2005) defines mother-to-child HIV transmission as the transfer of the virus from an HIV-positive mother to her HIV-negative child during pregnancy, labour, delivery, or breast feeding. According to the Joint United Nations Programme on HIV and AIDS (UNAIDS) (2016), between 2010 and 2016, Nigeria had a remarkably high rate of new HIV infections among children (90 percent). This could mean that some mothers aren't aware of the dangers of HIV and how it is spread, especially from mother to child (MTCT). The risk of MTCT from an HIV-positive mother to her unborn child increases if the pregnant woman does not know how the virus is transmitted from the mother to the child. According to UNAIDS (2016), this may have prompted the launch of HIV/AIDS preventive programmes (including HIV/AIDS counselling and testing) in a number of countries, including Nigeria.

The rising rate of MTCT is alarming, but counselling has been shown to be an effective method of reversing the trend in Ekiti State, Nigeria. Pregnant women living with HIV can benefit from counselling because it provides the emotional and practical assistance they need while also addressing any issues of a social or psychological nature that have arisen as a result of the virus. Counselling is a methodical approach to helping those in distress, say Mary-Rose and Adimanyi (2019). In this case, the expert is the counsellor, and the client is the pregnant woman who tests positive for HIV. Counselling is essentially a two-person relationship in which the counsellor tries to help the counsellee (client) get his or her life in order so that he or she can make the most of the changes that have occurred. Counselling is necessary for pregnant women so that they can learn more about their pregnancy, how to cope with it, their HIV status, and the likelihood of MTCT.

The HIV prenatal clinics in Ekiti State were found to have the resources to provide some form of HIV counselling. But are HIV-positive women taking advantage of these options? Do they know about the assistance they offer? The services may not be as noticeable, or the counsellors may not have been as effective, because they have other responsibilities in other parts of the organisation. It's also possible that the recipients aren't making use of them due to a lack of follow-up or a concern about being stigmatised. Scientists documented the instance of an infected pregnant woman who gave birth to twins. She felt compelled to pay a visit to a family member, but she prefers that no one in her family know that she has HIV. Since she was still nursing her third child, she decided to forego taking her medication. Despite receiving adequate counselling, the mother's anxieties of discrimination, dissociation, and stigmatisation led to the baby contracting the virus.
A number of other demographic factors may be responsible for the attitude of these women to counselling. Will age contribute to the non-adherence of HIV positive pregnant woman to

counselling services? When an underage girl is pregnant, she may not know that she is pregnant or not want to open up to her parents or an elder person for the fear of been scolded or sent out of the house. She might have contracted the virus from the man without knowing. If such pregnancy is kept there is higher percentage of the child having the virus too as the girl may not be exposed to antenatal clinic or even be aware of counselling services for pregnant women.Also, the marital status of woman can determine their adherence level. A woman who is legally married without any history of prostitution have a lesser chances of contracting HIV except if the husband is positive while a woman who has no stable partner can easily contract HIV and may not be aware of her status. Such woman may also not have any exposure to antenatal clinic during her pregnancy because she is not sure of who owns the pregnancy. In a study, the highest prevalence was observed by formerly married women and those that settle in urban community (Kwiek, et al 2008). Also Konate et al (2017) found out that prevalence of HIV was high among in single parents than the married mothers.

Knowledge is power, no doubt. It is believed that when one has a wide exposure and has a little educational level it gives one wider information and exposure. An educated woman would have heard of knowing your status during pregnancy, so she is not ignorant of her any health status while one whose educational level is low may not have any information at all or little unclear information and she may not bother to know more. Konate, et al found out that the prevalence of HIV varies significantly among the educational status of the pregnant women. (2.71%) for secondary education, (2.68%) for primary education, (1.92) for tertiary education.

Religion also may contribute to the level of one's information on HIV. Some religious denominations do not support medical related issues like resulting to surgical operating or using drug among others. There are possibilities of such women to contract HIV and may not consider going to hospitals even when pregnant. As they are no medical check-ups, there is the possibility of the child having the virus too.

The women occupation can also expose them to relevant information on their health status. For instance, one who works in the hospital may have first-hand information about health than the one working in court, library, school and others. This research is therefore interested in finding out the level of HIV positive pregnant women's adherence to the counselling services received in Ekiti State Government antenatal clinics and the possible influence of some demographic variables on the women's adherence to counselling services on mother-to-child HIV transmission among HIV positive pregnant women in Ekiti State, Nigeria.

Research Questions

The following research questions were raised for the study;

1. What are the HIV counselling services available in Ekiti State Government antenatal clinics?

2. What is the level of HIV positive pregnant women's adherence to the counselling services received in Ekiti State Government antenatal clinics?

Research Hypothesis
This hypothesis was raised and tested:

Ho1: There is no significant relationship between the demographic variables (education, occupation type, marital status and religion) of HIV positive pregnant women and their adherence level to counselling services received.

METHODOLOGY

This study used a descriptive survey as its research method. All HIV-positive pregnant women in Ekiti State who were enrolled in an antenatal care programme were included in the study. Each of Ekiti State's sixteen Local Governments includes a town with access to HIV Counselling services. There are two full-service hospitals in the state, one in each of two distinct jurisdictions. As of the time of this research, 501 of the total 794 HIV patients in the state are women (EKSACA, 2019). One hundred and ten (110) clients were used as part of a strategically-chosen sample for this investigation. In the first step, we used a purposive sample strategy to select a single LGU. Due to the location of the state's tertiary hospitals within the jurisdiction of the local government, a purposeful sampling method was employed. In the second step, a municipality with a tertiary medical centre was chosen at random inside the chosen local government. The next step entailed the deliberate selection of the pregnant women who showed up for clinic. The pregnant women were chosen from the HIV positive clientele already utilising the clinic's services. The social workers at the chosen hospital were also given a questionnaire about the hospital's counselling services.

A self-created questionnaire and a modified questionnaire served as the study's primary instruments. To gather data on HIV-positive pregnant women in Ekiti State, a self-designed questionnaire titled "Counselling Services for HIV Positive Pregnant Women Attending Antenatal Clinic in Ekiti State" was distributed and filled out by hand. There are two parts to the questionnaire: Section A asked for basic client information, whereas Section B was designed to gauge how regularly clients made use of counselling services. The second tool, titled "Counselling Services Available," was adapted and created by the Federal Ministry of Health (NACA, 2014). In order to learn about the hospital's counselling services, the customised instrument was used to question social workers.

Both external and internal validity approaches were applied. Professionals in the disciplines of testing and measurement as well as guidance and counselling reviewed the questionnaire items. The experts assisted in establishing the appropriateness of the instrument at face value to assure

its face validity. The items were validated by subject matter experts to make sure they accurately reflected the variables sought for by the research questions and hypotheses. By doing so, we were able to get rid of everything that was irrelevant or unclear. Using a test-retest strategy, we were able to assess the instrument's dependability.

The reliability of the instruments was calculated using a test-retest strategy. The first tool was used twice, separated by a two-week period. Ten individuals who were treated at one of the secondary facilities but were not included in the study's sample were used. We compiled and assessed the responses of our survey's participants. Pearson Product Moment Correlation analysis was used to determine the relationship between the test scores and the overall performance. Significantly, the coefficient of dependability was calculated to be 0.85. This was thought to be excessively high to ensure the instrument's accuracy.

Two weeks separated each administration of the second instrument, which was distributed to social workers at the selected secondary hospital. The secondary hospital that was not included in the study's sample provided two (2) social workers. We compiled and assessed the responses of our survey's participants. Pearson Product Moment Correlation analysis was used to determine the relationship between the test scores and the overall performance. Significantly, the coefficient of dependability was calculated to be 0.85. This was thought to be excessively high to ensure the instrument's accuracy. Questionnaire results were analysed with both inferential and descriptive statistics. Statistics such as frequency, percentage, mean, standard deviation, and charts were employed to provide insight into the research topics. Pearson's Product Moment Correlation analysis was used to evaluate the hypothesis at the 0.05 level of significance.

RESULTS

Demographic Characteristics of the Respondents

Table 1**: Demographic Information of Respondents (HIV Positive Pregnant Women)**

Variables	Grouping	**Frequency**	**%**
Educational status	Non formal education	55	50.0
	Primary education	15	13.6
	Secondary education	25	22.7
	Tertiary education	15	13.6
Total		110	100
Occupation	Civil servant	13	11.8
	Artisan	80	72.7
	Trading	17	15.5
Total		110	100
Marital status	Married	105	95.5

	Divorced	05	4.5
Total		110	100
Religion	Christianity	62	56.4
	Islamic	48	43.6
Total		110	100

Table 1 shows that majority of the respondents, 55 (50.0%) have no formal education, followed by 25 (22.7%) who had secondary school education while 15 (13.6%) each who had primary and tertiary education. This indicates that the majority of the respondents lack literacy education. Further information from the table shows that majority of the respondents, 80 (72.7%) were artisan, followed by 17 (15.5%) who engage in trading while the remaining 13 representing 11.8% were civil servants. This implies that majority of the respondents were not salary earners, possibly due to their low level of literacy. On marital status, majority of the respondents, 105 representing 95.5% were married and still living with their spouse while the remaining 5 (4.5%) have issue of divorce after marriage. Also, 62 representing 56.4% of the respondents embraced Christian religion while 48 (43.6%) claimed Islamic religion.

Research Question 1: What are the HIV counselling services available in Ekiti State Government antenatal clinics?

In order to answer the question 1, responses relating to HIV counselling services available as contained in the questionnaire titled "Counselling Services Available" were obtained and subjected to statistical tool involving frequency count and percentage. The result is presented in Table 2 below

Table 2: **HIV Counselling Services Available in Ekiti State Government HIV Antenatal Clinics**

S/N	**HIV Counselling Service Available**	**Available**		**Not Available**	
		YES	**%**	NO	%
1	Adherence Counselling and Testing	5	100	0	0
2	Antiretroviral Therapy	5	100	0	0
3	Family Planning	5	100	0	0
4	Nutrition Counselling	5	100	0	0
5	Psychological Support	5	100	0	0
6	Other Sexual Transmitted Services	5	100	0	0
7	Couple Counselling	5	100	0	0
8	Tuberculosis Services	5	100	0	0
9	HIV Testing and Counselling	5	100	0	0

Table 2 shows that all the respondents, 5 (100%) agreed that the identified HIV counselling services are available in Ekiti State Government antenatal clinics, that is adherence counselling and testing, antiretroviral therapy, family planning, nutrition counselling, psychological support, other sexual transmitted services, couple counselling, tuberculosis services, HIV testing and counselling. Thus, there is adequate HIV counselling services available in Ekiti State Government antenatal clinics.

Research Question 2: What is the level of HIV positive pregnant women is adherence to the counselling services received?
In order to answer the question, aggregate positive response of the respondents in Items 1 - 21 of Section B of the first instrument titled, 'Counselling Services for HIV Positive Pregnant Women Attending Antenatal Clinic in Ekiti State' were obtained and subjected to descriptive analysis involving mean and standard deviation and value of $\bar{X}$=17.15 ± 6.29 was obtained for mean and standard deviation. To determine the level of adherence to the counseling services received (low adherence, moderate adherence and high adherence), the mean and standard deviation obtained was further manipulated and afterward subjected to descriptive analysis using frequency counts and percentage. The upper limit for low level adherence was determined by subtracting the standard deviation from the mean score (17.15 – 6.29 =10.86) while the lower limit for high level adherence was determined by adding the mean score and standard deviation (17.15 + 6.29) = 23.44). Therefore, low level adherence counseling ranges from 0 – 10.85, the moderate level adherence starts from 10.86 – 23.43 and the high level adherence starts from 23.44 – 25 as in presented in Table 4.

Table 3: Adherence Level of HIV Positive Pregnant Women to the Counselling Services in Ekiti State

Score Level	**Frequency**	**Percentage**
High Adherence (23.44 – 25)	12	10.9
Moderate Adherence (10.86 – 23.43)	86	78.2
Low Adherence (0 – 10.85)	12	10.9
Total	**110**	**100**

Table 3 shows the adherence level of HIV positive pregnant women to the counselling services received. The result indicated that majority of the respondents, 86 (78.2%) had moderate adherence to the counselling services received while 12 representing 10.9% each had high and low adherence. This implies that majority of the respondents sampled moderately adhere to the counselling services received.

Test of Hypothesis

Research Hypothesis: There is no significant relationship between the demographic variables of HIV positive pregnant women and their adherence to counselling services received.
In order to test the hypotheses, scores relating to the demographic variables of HIV positive pregnant women and their adherence to counselling services received items in section A and section B of questionnaire titled "Counselling Services for HIV Positive Pregnant Women Attending Antenatal Clinic in Ekiti State" were computed and subjected to statistical analysis using correlation matrix. The result is presented in Table 4 below.

Table 4: Correlation Matrix of Relationship between the Demographic Variables of HIV Positive Pregnant Women and their Adherence to Counselling Services Received (N=110).

Variables	Mean	S.D	Counselling	Education	Occupation	Marital Status	Religion
Counselling Services	17.15	6.28	1				
Education	2.09	1.25	-.877*	1			
Occupation	2.04	0.52	-.837*	.656*	1		
Marital Status	1.05	0.21	-.527*	.336*	.404*	1	
Religion	1.44	4.98	-.731*	.897*	.537*	.248*	1

***Significant at P<0.05**

As can be seen in Table 4, there is high and negative correlation between education status (r=-0.877), occupation status (r=-0.837), marital status (r=-0.527) and religion status (r=-0.731) of HIV positive pregnant women and their adherence to counselling services received at 0.05 level of significance. The null hypothesis is rejected. Therefore, there is significant inverse relationship between the demographic variables of HIV positive pregnant women and their adherence to counselling services received. This result showed that adherence to counselling services received by HIV positive pregnant women is influenced by their level of education, occupation, marital status, and religion affinities.

DISCUSSION OF FINDINGS

Based on the data collected, it was determined that 55 (50.0%) of the clients have never completed high school, 25 (22.7%) have completed some college level coursework, and 15 (13.6%) have completed both elementary and postsecondary education. This suggests that most respondents are illiterate, which may be the reason they are HIV positive: they lack formal education and hence have not had access to first-hand information on HIV, including its mode of transmission and

methods for prevention. The high mean score of knowledge reported here contrasts with a comparable study by Mary, et al (2018), in which the majority of participants (61,7%) acquired at least an ordinary level of schooling. The pregnant women, regardless of their level of education, have a broad understanding of HIV and the methods available for preventing the virus from being passed from mother to child. However, studies have shown that more education leads to better PMTCT ART adherence (Boateng, et al., 2013; Wapmuk, et al., 2017). The chart also reveals that 80 respondents (or 72.7% of the total) were artisans, 17 (15.5%) were merchants, and 13 (11.8%) were government employees. This suggests that most respondents did not have regular sources of income, perhaps because of their low levels of education. The vast majority of respondents (105, or 95.5%) are happily married and living with their partners, whereas five respondents (4.5% of the total) are dealing with post-nuptial problems. Furthermore, 62 (or 56.4%) of the respondents are Christians, whereas 48 (or 43.6%) are Muslim, showing that HIV infection does not discriminate based on faith.

All of the respondents (social workers) in this study agreed with all of the items given to them about the counselling services that are expected by the Federal Ministry of Health on HIV counselling and testing, suggesting that adequate HIV counselling services are available in Ekiti State Government antenatal clinics. This demonstrates that the state government is actively working to prevent the spread of HIV from mother to child and within afflicted families.

Importantly, the study also found that demographic factors of HIV-positive pregnant women were not significantly inversely related to their adherence to counselling services. Women who are HIV-positive during pregnancy are more likely to follow the advice of their counsellors if they share their same level of education, line of work, marital status, and religious beliefs. Non-adherence to treatment was shown to be more prevalent among people with lower levels of education, marriage, ethnicity, and occupation. In line with a recent analysis by Parades et al. (2013), the two most examined characteristics in a person's way of life that affect their sense of self-efficacy are their degree of education and their income. Wapunk et al. (2017) confirmed a similar finding in Thailand; they discovered that even though educational levels were generally low, there was some correlation between educational status and missing appointments.

CONCLUSION

The results of the study show that pregnant women who are HIV positive have a modest level of adherence to the counselling services they have received at the antenatal clinic in Ekiti State. There is also a significant education, employment, marital status, and religious affiliation bias in the counselling services obtained by HIV-positive pregnant women in Ekiti State.

Recommendations

From the findings of the study, the following recommendations were made:

1. The government shouldn't let up on its efforts to eliminate mother-to-child HIV transmission.
2. HIV clinic social workers and counsellors should keep spreading the word about the importance of taking precautions to stop the virus from being passed from mother to child
3. More attention needs to be paid to educating expectant mothers on the fact that HIV is preventable and cannot be passed on to their unborn child if the mother takes the necessary precautions.

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